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## ***Hurricane Response:***

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<http://www.houstonchronicle.com/news/politics/houston/article/Mayor-council-clash-over-Harvey-debris-removal-12216212.php>

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State workers are busy removing signs of Harvey's devastation across Texas. So far, 432,000 cubic feet or eight football fields worth of debris have been cleared from Texas roadways, according to Gov. Greg Abbott.

### **3 — Spills Reported at One of Houston's Most Toxic Superfund Sites, Texas Monthly, 9/21/17**

<https://www.texasmonthly.com/energy/spills-reported-at-one-of-houstons-most-toxic-superfund-sites-after-harvey/>

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The U.S. Army Corps of Engineers has agreed to review Harris County's flood control regulations to gauge whether they sufficiently neutralize the flood risk posed by the region's booming development, a question that has drawn increasing scrutiny after a series of storms in recent years, capped by Hurricane Harvey, have devastated the region.

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Hurricane Harvey hit the Houston energy sector hard, knocking out refineries and chemical plants for weeks, but not as hard as it could have if the storm had taken a slightly different path and sent waves and water surging straight up the Houston Ship Channel.

***Other news:***

**8 — Protesters demand Environmental Impact Study for Bayou Bridge, LOGA reacts, KATC, 9/21/17**

<http://www.katc.com/story/36426571/protesters-demand-environmental-impact-study-for-bayou-bridge-loga-reacts>

The debate over the proposed Bayou Bridge Pipeline continues. Protesters in front of the Governor's Mansion in Baton Rouge are demanding an Environmental Impact Study (EIS) be done on the proposed pipeline and are hoping to get the governor's attention to oppose the project.

**9 — Water treatment plant near Gold King mine filters out sludge, KOB, 9/21/17**

<http://www.kob.com/new-mexico-news/water-treatment-plant-gold-king-mine-filters-out-sludge/4610546/>

If you have wandered up in the mountains near Silverton, you may have seen a facility tucked away in the hills close to the site of the Gold King Mine spill. That facility would be a water treatment plant.

**10 — Fracking rule may see jumbled comeback as court tosses case, E&E News, 9/21/17**

<https://www.eenews.net/stories/1060061415>

Confusion and mixed messages dominated the conversation yesterday as court watchers unpacked a major ruling on the Obama administration's embattled hydraulic fracturing rule.

**11 — Who watches WIPP?: Monitoring center a watchdog as facility recovers, Albuquerque Journal, 9/22/17**

<https://www.natlawreview.com/article/epa-announces-updates-to-pesticide-label-review-manual>

At the Carlsbad Environmental Monitoring and Research Center (CEMRC), air and soil samples from near and at the WIPP site, located just 23 miles from Carlsbad, are constantly being studied for heightened levels of radiation.

**12 — Dispersant used in BP oil spill sickened workers, new federal study confirms, New Orleans Times-Picayune, 9/22/17**

<http://www.nola.com/environment/index.ssf/2017/09/dispersant-used-in-bp-spill-ma.html>

The chemicals that were used to break up oil from the 2010 BP Deepwater Horizon blowout have long been suspected of sickening workers who responded to the disaster. Now a federal health agency is backing some of their assertions.

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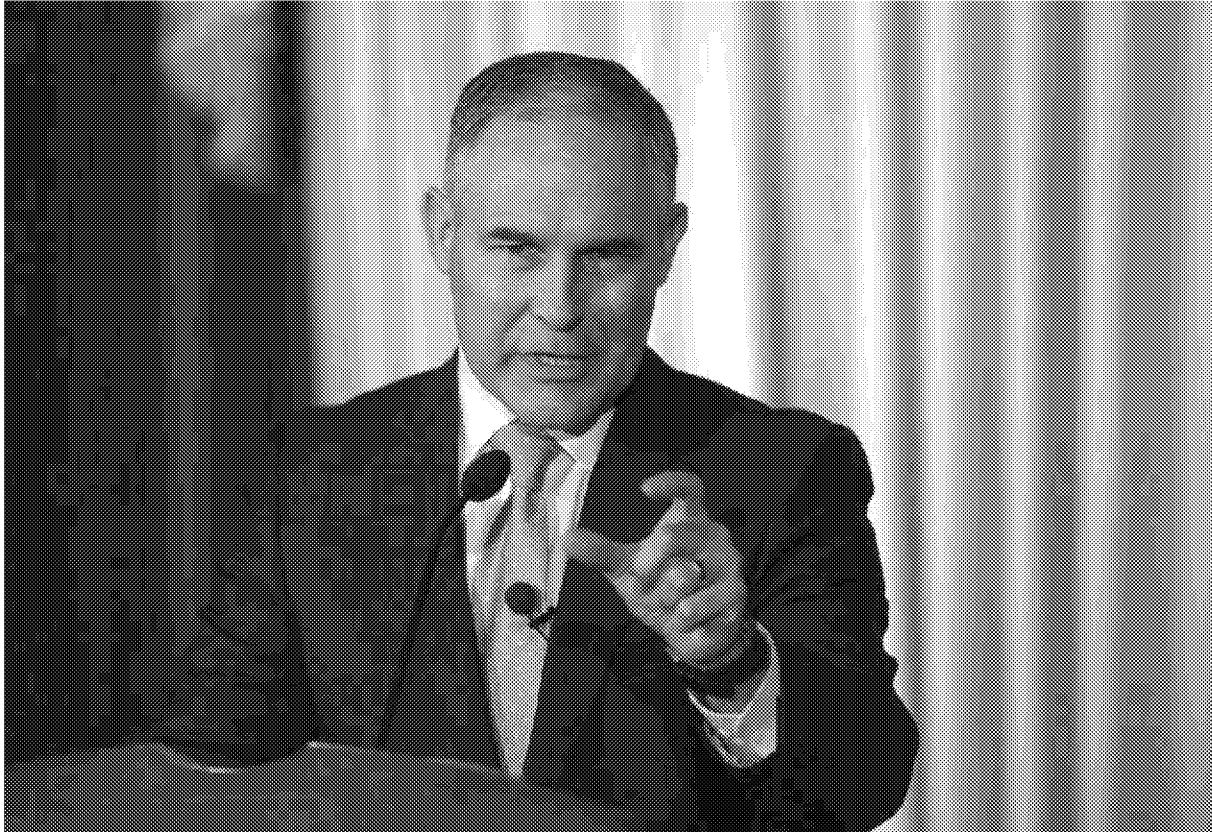
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**Chron** <http://www.chron.com/news/politics/article/After-Harvey-EPA-administrator-vows-bold-12218929.php>

## After Harvey, EPA administrator vows bold response to polluted sites around Houston

By Kevin Diaz Updated 4:42 pm, Thursday, September 21, 2017

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FILE - In this Feb. 21, 2017, file photo, Environmental Protection Agency (EPA) Administrator Scott Pruitt speaks to employees of the EPA in Washington. Pruitt's schedule shows he met with Dow CEO Andrew Liveris for about a half hour on March 9 during a conference held at a Houston hotel. Twenty days later Pruitt announced his decision to deny a petition to ban Dow's chlorpyrifos pesticide from being sprayed on food, despite a review by his agency's own scientists that concluded ingesting even minuscule amounts of the chemical can interfere with the brain development of fetuses and infants. EPA released a copy of Pruitt's March meeting schedule earlier this month following several Freedom of Information Act requests. (AP Photo/Susan Walsh, File)

WASHINGTON — Environmental Protection Agency Administrator Scott Pruitt, who has visited Texas twice since Hurricane Harvey, vowed Thursday to have "an answer" by next month for a permanent solution to clean up the San Jacinto River Waste Pits.

"What was concerning about that site in advance of the storm, and is a concern today, frankly, and that is that the response, the capping that's taken place, this agency's had to work through remediation efforts every year since 2011," he said in a Chronicle interview. "So there's not been a permanent solution that's really been applied there that provides confidence to the citizens in advance of these kinds of storms."

The EPA Superfund site has been packed with dioxins and other toxic substances from a local paper mill for the past four decades.

"What's needed at San Jacinto is an answer," he said. "What's needed is a permanent solution...and as I indicated on the site, that is coming.... We're going to provide an answer to that site that is going to provide permanency."

On option under consideration, he said, is excavating and removing material around the polluted site, rather than capping it. "The alternative (to capping)," he said, "is excavation."

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In the wake of the chemical explosion at the Arkema Inc. plant in Crosby, Pruitt said the EPA has given the company another 30 days to provide information about its risk management plan and the steps it took when the site flooded and its employees were forced to evacuate, leaving behind volatile toxic chemicals that ignited due to lack of power and refrigeration.

The company, in an initial response filed last week, sought a 90-day extension, Pruitt said.

The issue has raised questions about proposed changes to industrial risk management plans, which remain under review.

"There have been questions about risk management plans having too much information that would actually empower and equip terrorists to come in and hit soft targets," Pruitt said. "So there's a balance there."

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In a wide-ranging interview, Pruitt also dismissed concerns about the potential closure of the EPA lab in Houston, part of a region that just saw a dozen Superfund sites flood.

Pruitt said the potential closure is part of a nation-wide organization review begun under the Obama administration, and that no decision has been made.

"I would not look at that as a decision that's final," he said. "That's a decision that's under review. Once we get better information through this process we'll be able to make a more complete decision about where regional labs should be located and how they serve the states..."

"This is still under review, and very well could stay in Houston," he added. "The overriding principle is we will have a presence, it will be a meaningful presence, it will be a partnership, and it will achieve the outcomes that are important in these areas."

Pruitt also dismissed concerns about a Trump administration proposal to cut EPA's budget by 31 percent, which has alarmed environmentalists.

"When people want to talk about the budget, it's pure speculation at this juncture," he said. "It's been addressed and discussed in Congress. Nobody in Washington D.C., no one here, would look at all the discussions that have happened here over the last several months in the budget discussions and anticipate a 31 percent cut, in any agency."

"The point is this," Pruitt added. "I told Congress that whether it's in the Superfund area or in any of these areas, if we need the resources, I will ask for it. ... It's simply speculation. There's been no budget cut and it hasn't impacted anything that we've done with respect to our (hurricane) response."

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HEARST

# Chemical exposure of neighbors of San Jacinto waste pits analyzed

By Christopher James christopher.james@baytownsun.com | Posted: Friday, September 22, 2017 12:00 am

When rains from Harvey decimated the Baytown and Houston areas, floodwaters inundated neighborhoods and released in excess of 1 million pounds of chemical pollutants, according to researchers.

Thirteen EPA Superfund sites, including the San Jacinto River Waste Pits, were inundated. With damage assessments underway, the extent of damage sustained at various sites is unknown.

While the EPA works to find any damage, Oregon State University has joined up with Texas A&M University, Baylor College of Medicine, the University of Texas School of Public Health and the National Institute of Environmental Health Sciences to find if an individual's chemical exposures have been affected by Harvey's flooding.

On Wednesday night, the Texas Health and Environmental Alliance facilitated the group of professors and students out at the Highlands Community Center to enroll residents in the study.

To know the extent of chemical exposure, the group is conducting a study using passive sampling to measure the number of chemicals that residents have come in contact with.

For each resident enrolled in the program, they are given a wristband, much like the "Livestrong" bands, that will measure a person's exposure to chemicals in their surrounding environment.

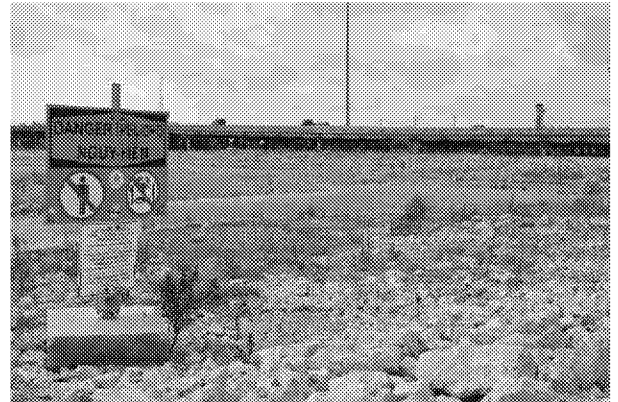
"What we're doing is deploying passive samplers. In this case the passive sampler is a silicone wristband that allows us to determine what chemicals an individual has been exposed to during the duration of wearing of the wristband," said Peter Hoffman, assistant director of Food Safety and Environmental Stewardship at OSU. "It doesn't require power, it doesn't require you to change your routine."

After a week of wearing the wristband, individuals mail the wristband back to Texas A&M, who will then ship it to OSU, where they will analyze the band for chemicals. The wristband can collect over 1,500 chemicals, including PCBs and dioxins, which can be found in the San Jacinto River Waste Pits.

The wristband, which works like a sponge, is very sensitive as it can detect chemicals below EPA detection levels.

After the analysis is complete OSU mails results to each individual.

On Wednesday night, about a dozen residents enrolled in the study to find out what, if any, chemicals they were exposed to.



San Jacinto Waste Pits Superfund Site

One such resident was Darrell Martin who lives near the Arkema plant in Crosby that exploded after floodwaters from Harvey inundated the facility.

“We think everything is contaminated. Our dogs are acting different, the chemicals killed one of our dogs, and now they won’t eat food off the ground. If you put food on the ground they’ll eat down to that level that’s touching the ground,” said Martin, who lives less than a mile from the Arkema plant. “All the grass that was exposed has turned brown.”

Martin and his family, which includes a newborn, no longer live in their house but Martin goes back on a daily basis for cleanup.

“This (study) was a way to get some information as to what we are being exposed to,” he said.

When the plant was burning, there was a chemical fog near his home that caused Martin to have burning eyes, nose and throat. When he called the Arkema hotline they told him to wash his face with hot water for 15 minutes.

“I didn’t really help then but it helped go away the next day, Martin said.

For Lynnwood resident, Felica Gregory, who received more than 2 feet of water in her home off Highway 146, the study will shed some light as to what chemicals she has been exposed to during cleanup.

“I’m really worried about being exposed to something because when we went in to clean the house everything was slippery, wet, there was chemical stench and it got me worried,” Gregory.

Since cleaning her house, Gregory says she has bites all over her body and has experienced some respiratory problems.

“Me and my classmates from Robert E. Lee High School, there was about six of us, stepped in and kicked walls in to hurry up and get the mold. We didn’t have face masks or anything and when the community realized we didn’t they gave us face masks,” Gregory said. “So I want to get information for my classmates and I because post traumatic stress disorder has kicked in.”

“I just want to get all the information I can get,” she added.





<http://www.chron.com/news/houston-texas/houston/article/harvey-flood-surface-water-map-contamination-12214453.php>

## New maps show how contaminated Houston surface water was following Hurricane Harvey

By Fernando Alfonso III Updated 4:26 pm, Thursday, September 21, 2017

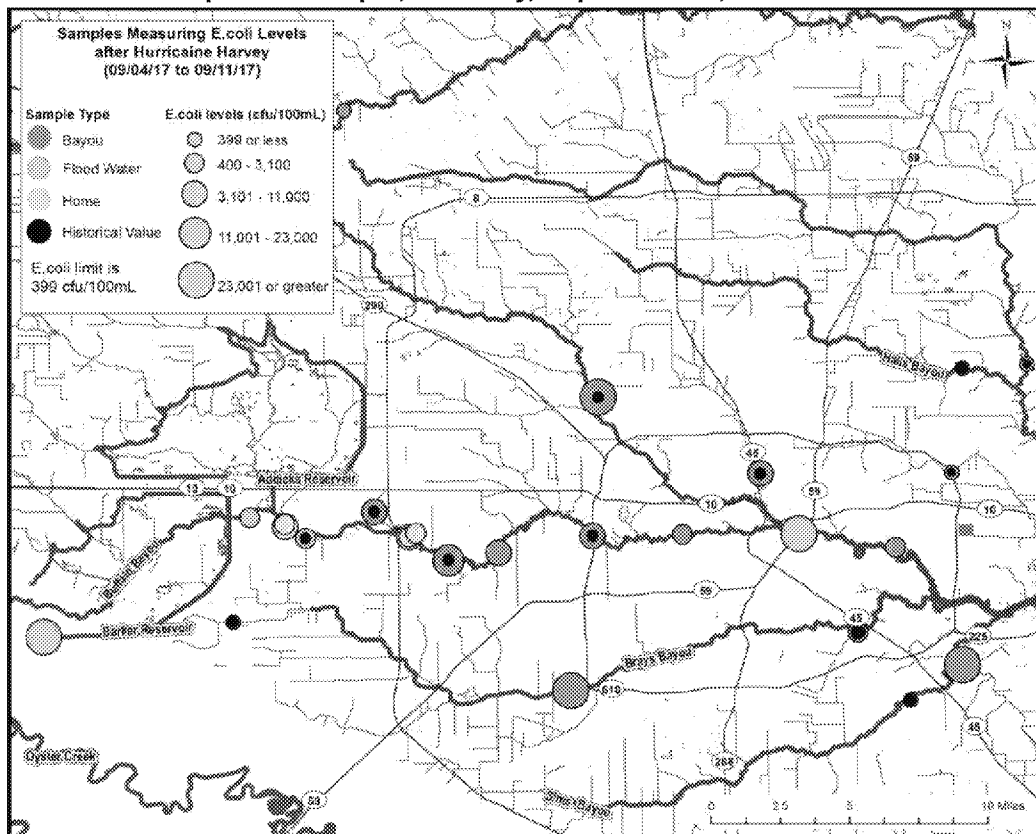


IMAGE 1 OF 134

A new map from the Houston Health Department shows how some surface water around the city still had high amounts of E.coli in it following Hurricane Harvey just as of last week.

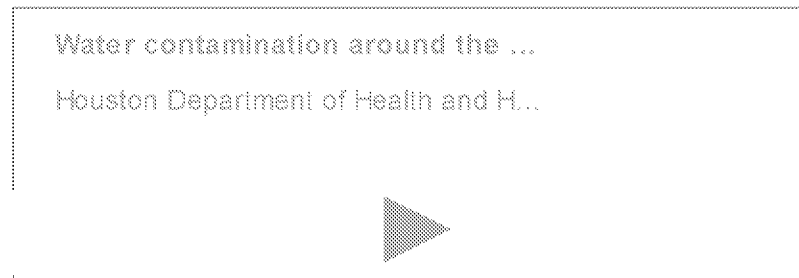
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New data from the Houston Department of Health and Human Services suggests that some areas exposed to Hurricane Harvey's flood water recorded higher than normal amounts of E. coli just as of last week.

Surface water near Barker Reservoir and water from Brays Bayou on I-610 contained 58 times the maximum level of E.coli deemed appropriate, Lisa Montemayor, environmental investigator for the city, told **Chron.com** Tuesday. These tests were taken between Sept. 4 and 11.

"The higher the count, the greater the likelihood that other waterborne pathogens are present," Montemayor added. "E. coli enters flood and surface waters from a number of sources including sewer back-ups, storm water runoff that carries bacteria from animal and pet waste, flooded wastewater treatment plants, and failing septic systems. In the case of Harvey, we had regional flooding that inundated our infrastructure and flooded two major treatment plants."



**GOING DOWN: E. coli in Clear Lake waters down to safe levels**

Aside from E.coli, water and around some Houston

found home and some heavy metals found in the soil outside of the same home, Montemayor said. Mercury was found by another health agency outside a home along the San Jacinto river.

Results were all consistent with sewage back-ups and suggest other sources, as well, but are unknown, Montemayor said.

"It suggests existing health hazards where both direct and indirect contact are concerned and people should heed the warnings they have been given about protecting themselves when entering areas that were flooded," Montemayor said. "[People] need to ensure they are disinfecting all exposed surfaces properly and are minimizing the conditions that encourage mold development, post-demolition."

**PLAY IT SAFE: Do you need a tetanus shot after wading in Hurricane Harvey flood waters?**

E. coli and related bacteria are produced from the feces of warm-blooded animals, including humans. The bacteria in and of itself may not necessarily make someone sick; however, its presence, especially in high numbers, indicates that there may be other pathogens present which can present health risks including but not limited to gastrointestinal illness, fever, diarrhea, and vomiting, Montemayor said.

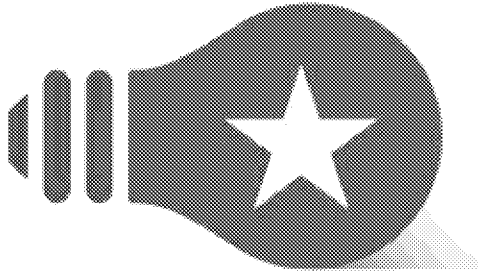
The health department regularly monitors E.coli at more than 100 locations, Loren Raun, chief environment science officer for the city, told **Chron.com**. Raun added that E. coli counts in surface water tend to increase after rain events due to non-point source runoff and storm water infiltration into the sewage system.

The data points reflected on the map were gathered by the health department and its academic partners Rice University and Baylor College of Medicine.

**Swipe through the slideshow above to see a map of the latest surface water testing results.**

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## Spills Reported at One of Houston's Most Toxic Superfund Sites

In a series of major chemical accidents caused by Harvey, this might be the worst yet.

by LEIF REIGSTAD | SEPTEMBER 21, 2017 | 1 COMMENT



**Floodwaters have inundated at least five highly contaminated toxic waste sites near Houston, raising concerns that the pollution there might spread. This September 2, 2017, photo shows the heavily polluted Patrick Bayou in the Houston Ship Channel that was flooded during Tropical Storm Harvey in Houston.**

AP PHOTO/JASON DEAREN



One of Houston's dirtiest Superfund toxic waste sites experienced three spills in the days after the torrential rain from Hurricane Harvey. But, as has been the case with other toxic spills resulting from Harvey, the spill went unreported for weeks, until the Associated Press got a look at some aerial photos that showed dark-colored water surrounding the site as the floodwater receded. The dark water was shown flowing through Vince Bayou and into the Houston Ship Channel.

The AP first reported the spills earlier this week; the Environmental Protection Agency has not publicly acknowledged them. The agency told the AP that it sent an on-scene coordinator to the Superfund site Wednesday last week, but found no evidence that material had washed off the site though they are still assessing the scene at U.S. Oil Recovery, a former petroleum-industry waste-processing plant contaminated with "a dangerous brew of cancer-causing chemicals," according to the AP.

A county pollution control team had sent photos to the EPA of three large concrete tanks flooded with water on August 29, after the Harvey floodwater had cleared out. And PRP Group, a company overseeing cleanup at the Superfund site, reported the spill via a federal emergency hotline operated by the U.S. Coast Guard. The company reported two more spills of potentially contaminated storm water from the site.



This handout aerial photo from the National Oceanic and Atmospheric Administration shows floodwaters surrounding the U.S. Oil Recovery Superfund site outside Houston flowing into the San Jacinto River.

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The U.S. Oil Recovery Site has a pretty bizarre history, according to the AP. It was shut down in 2010 after regulators found it posed an environmental threat to Vince Bayou. Pollution at the plant is so bad that the company's owner, Klaus Genssler, was charged with five criminal felonies by Texas prosecutors. But the German native fled the United States, and is now considered a fugitive. More than 100 companies, that dumped their hazardous and oily waste there, including Baker Hughes, U.S. Steel Corp. and Dow Chemical, are now pitching in to pay for the multimillion-dollar cleanup through a court-monitored settlement. Workers have have removed more than 1.5 million gallons of liquid waste from the Superfund site, which is enough to fill nearly three Olympic-sized swimming pools. According to the AP, the southern portion of the site, including the three waste tanks that flooded during Harvey, has yet to be fully cleaned.

This is at least the third high-profile chemical disaster to come to light since Harvey. The EPA is currently investigating whether Arkema followed safety rules at its plant in Crosby. Chemical containers exploded at the site and were on fire for days when the facility sustained damage during flooding. A group of first responders and homeowners have also filed a lawsuit against Arkema, seeking damages after they were sickened following exposure to chemicals. Floodwaters also triggered a massive spill near Houston's Galena Park neighborhood, where a Magellan Midstream Partners facility leaked 11,000 barrels—or 460,000 gallons—of oil. And in the days after Harvey, the AP reported that at least seven Superfund sites in and around Houston were inundated with water, not including the U.S. Oil Recovery site, while Reuters reported earlier this month that the Coast Guard and the EPA were working with Texas state regulators to clean up spills at a dozen industrial facilities.

Tags: ENERGY, ENVIRONMENT, HURRICANE HARVEY, SUPERFUND

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## Related Content



# Harvey — and storms to come — raise worries about dam safety

By Ryan Maye Handy | September 21, 2017 | Updated: September 22, 2017 8:31am

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Photo: Brett Coomer, Staff

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**IMAGE 1 OF 2**

Floodwaters inundate a petrochemical plant in the aftermath of Tropical Storm Harvey on Wednesday, Aug. 30, 2017, in Pasadena. ( Brett Coomer / Houston Chronicle )

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The state climatologist is warning that Texas dams will become less able to withstand extreme weather events like Hurricane Harvey, which are expected to occur more frequently as the earth's atmosphere and oceans warm in coming years.

Dams are designed with a wide margin of safety and are meant to withstand extreme, worst-case scenarios that are never expected to happen. But what stunned state climatologist John Nielsen-Gammon and other weather experts was that Harvey exceeded or matched the preposterous amounts of rainfall that dams in Texas are built to hold back.

"The probable maximum precipitation amount should never be reached," said Tye Parzybok, the chief meteorologist at MetStat, a Colorado-based company that helped Texas calculate the rainfall amounts. "It should never get close to it."

After Harvey, dam regulators will have to recalculate the maximum amount of water that dams should be capable of holding back, said Nielsen-Gammon. Climate change means that powerful storms are bringing vastly more rain than they did a century ago, he said.

"I'm not saying they're unsafe," said Nielsen-Gammon of Texas' dams. "They will be less safe than they were designed to be."

While the relationship between climate change and hurricanes is uncertain, there is near unanimous agreement among scientists that the increasing concentration of carbon dioxide in the atmosphere — much of it from burning fossil fuels — is raising global temperatures and warming the oceans, causing more water to evaporate. The buildup of moisture, in turn, is leading to more extreme rains; the record-breaking rainfall brought by Harvey — 51 inches in Harris County — was likely up to 7 percent greater than it would have been a century ago because of climate change, said Nielsen-Gammon.

Local and federal governments, regulators and private industry are now grappling with managing the effects of climate change in designing and constructing buildings, highways, bridges, water and sewer systems and other public works. There is no method, yet, for factoring climate change into the rainfall amounts dams should be capable of withstanding — but that's something Nielsen Gammon hopes to change.

On Friday, he will give a presentation in San Marcos at a conference of civil engineers making the case for incorporating climate change into rainfall measurements that are used to design dams, nuclear power plants and other projects that are meant to never fail.

There are 4,008 state-regulated dams in Texas, more than 1,200 of which are considered high risk, meaning their failure would kill people, according to the Association of State Dam Safety Officials. Dams are designed to hold a hypothetical amount of rainfall over a given time period and over a certain area, a calculation called a probable maximum precipitation amount.

The calculations are based on historical rainfall data, which is part of a complex calculate that estimates a margin of safety. Last year, after nearly 40 years since probable maximum precipitation amounts were first calculated for building dams, the Texas Commission on Environmental Quality, which oversees dam safety, updated the amounts the state's dams should be designed to hold.

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**Army Corps to examine Harris County flood control regulations**

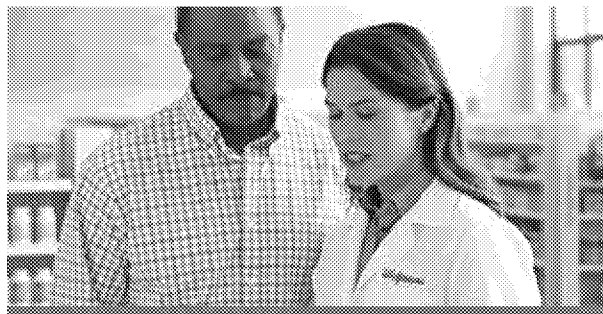
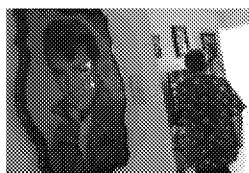
**Sen. Ted Cruz says flood control will be a priority**

**in Congress**

But Harvey already has challenged those values, and that should warrant another update that factors in a storm that holds the record for most rainfall in the continental United States, said Nielsen-Gammon. He added that there is no reason to assume that record won't be matched, or exceeded, in the future.



**City of Liberty claims new unofficial Harvey rainfall record: 55**



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"Climate scientists expect — based on observations and models — that the maximum is increasing and will continue to increase," he said. "The frequency of extreme rainfall events is increasing and it's expected to do that because of climate change."

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**TRANSLATOR**

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# Army Corps to examine Harris County flood control regulations

**Agency will study development's impact on regulations, region's risk**

By **Mihir Zaveri** | September 21, 2017 | Updated: September 22, 2017 12:14am



Photo: Gary Coronado, Staff

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A Cypress subdivision illustrates a county flood control rule on "detention" - a requirement that any development hold runoff in a basin and release it slowly so as to not increase flooding downstream.

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The U.S. Army Corps of Engineers has agreed to review Harris County's flood control regulations to gauge whether they sufficiently neutralize the flood risk posed by the region's booming development, a question that has drawn increasing scrutiny after a series of storms in recent years, capped by Hurricane Harvey, have devastated the region.

The Harris County Flood Control District already had begun a review of the regulations and asked in August for a third-party re-examination by the Corps. The district expects preliminary results at the end of October.

"We are looking at where development is going, is there any trend that we are seeing," said Ataul Hannan, planning division director for the flood control district. "We might have to go in and fine-tune areas."

The county's flood control rules largely center around a principle called "detention," a requirement that any development - subdivision, strip mall, gas station - hold runoff in a basin and release it slowly so as to not increase flooding downstream.

Regulations mandate that the basins, also called detention ponds, hold enough water to mimic the landscape being paved over.

After repeated storms in recent years, a growing chorus of critics has connected the county's rapid development with its destruction.

Following last year's Tax Day floods, a Houston Chronicle investigation found that flood control regulations, including detention requirements, routinely were undercut by developers.

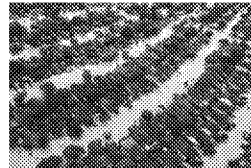
Hannan said the flood control district is looking at runoff information going back several decades - examining how water flowed in undeveloped areas and comparing it to data collected more recently, to see if the detention rules were doing enough. The study used data from 30 to 40 gauges across the county, he said.

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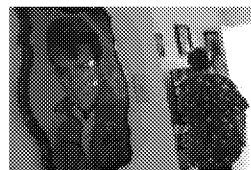
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**Harvey - and storms to come - raise worries about dam safety**



**Sen. Ted Cruz says flood control will be a priority in Congress**



**City of Liberty claims new unofficial Harvey rainfall record: 55**

### *Updated after Allison*

The detention requirements largely have been unchanged since the county adopted them in the mid 1980s. The only change has been made in one part of the county in the northwest, where flood control officials increased the minimum amount of stormwater any development would have to detain because of the unique way water flows south from Cypress Creek.

To complete the current study, the flood control district asked a consultant to review the effectiveness of its detention regulations last year. Shortly before Harvey hit, the district asked the Army Corps to review the results, to get an independent, outside assessment.

The Army Corps review will cost the county roughly \$10,000.

Army Corps spokesman Randy Cephus confirmed Thursday that the Corps was asked to do the review, but said it had not yet received payment to conduct it. He said the review would begin once the Corps gets the money.

Flood control leaders have pledged to boost detention requirements if the study finds the existing rules are insufficient.

Understanding of flood control has evolved over the years. Floodplains were not drawn

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#### **BY THE NUMBERS**

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***30 years***

**Floodplains weren't drawn in Harris County until the mid-1980s.**

***180,000***

**Homes and structures that exist today in county floodplains.**

***\$10,000***

**Cost of the Corps' study.**

---



until the mid-1980s, when roughly 2.7 million people already lived in the county. Today, nearly 180,000 homes and structures exist in floodplains in the county.

A multi-year effort after Tropical Storm Allison updated the county's floodplain maps, which in some cases were significantly outdated.

### *'Not strict enough'*

In the late 2000s, the county's estimates of what constitutes "100-year rainfall," the level of rainfall that developments must be prepared to detain, also changed - meaning nearly every development built prior to that time was not holding enough stormwater.

Jim Blackburn, an environmental attorney who has sued the Corps and the county over flood control issues, said a Corps review would not be objective, given the ties between the agencies.

"They need an independent assessment because the problem with Harris County's detention regulations is they are not strict enough," said Blackburn, a co-director of Rice University's center for Severe Storm

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### TRANSLATOR

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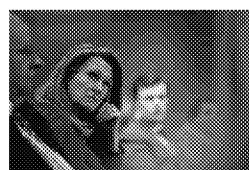
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**Harris County to hold mid-year budget review next week**



**Army Corps to examine Harris County flood control regulations**



**Railroad Commission executive director resigns**

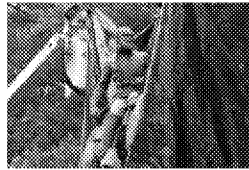
## Prediction, Education, and Evacuation from Disasters.

Meanwhile, the city of Houston also is taking a second look at its detention requirements.

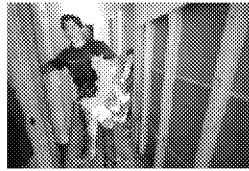
Stephen Costello, appointed "flood czar" by Mayor Sylvester Turner in May 2016 after the Tax Day flood, said he is assembling next month a task force of public officials,

community leaders, engineers and developers

to re-examine, among other issues, whether the city is requiring developers to detain enough runoff.



**Listen: Confederate statues in The Woodlands, Satan and a**



**Kent Sullivan appointed new state insurance commissioner**

"I think the community at large would like to see stricter requirements," he said.

Costello said results from that task force likely would come in February or March.

## Explore Harvey's broad reach

*More than 90,000 residential structures in Harris, Galveston and Fort Bend counties could have been damaged by floods from the storm as of Aug. 27, according to flood models released by the Federal Emergency Management Agency. The map below features waterways, in dark blue; 100-year floodplains, in light blue; 500-year floodplains, in blue-green; destroyed structures, in dark red; structures with major damage, in orange; affected structures, in yellow; and structures with minimal damage, in gray.*



# Will Hurricane Harvey bring federal support for the 'Ike dike'?

**Industry, political leaders hasten push for coastal barriers**

By **Jordan Blum** | September 21, 2017 | Updated: September 21, 2017 11:49pm



Photo: Michael Ciaglo, Staff

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#### IMAGE 1 OF 2

An Army Black Hawk helicopter, carrying Army Corps of Engineers officials in 2016, flies over the Houston Ship Channel. A dike, also known as the "coastal spine," is being proposed to protect Galveston, Bolivar ... more

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Hurricane Harvey hit the Houston energy sector hard, knocking out refineries and chemical plants for weeks, but not as hard as it could have if the storm had taken a slightly different path and sent waves and water surging straight up the Houston Ship Channel.

Now, local industry and political leaders are moving quickly to gain federal support for building a system of protective barriers against the possibility of far more destructive storm surges in the future, when powerful storms are expected to happen more frequently as ocean waters get warmer.

"The sympathy level for this area is high. This is our opportunity," state Sen. Larry Taylor, R-Friendswood said. "We need a direct appropriation from Congress with a deadline, 'Here's the money, go build it.' "

Getting funding for coastal barriers was a major topic Thursday at the Gulf Coast Industry Forum in Pasadena, which, among other industry and political leaders, attracted Secretary of Energy Rick Perry and U.S. Sen. Ted Cruz, R-Texas.

The idea for such a system to protect Galveston Bay, the Houston Ship Channel and much of the Houston region from a massive storm surge was born nine years ago, after Hurricane Ike battered the region with high winds and violent seas and left 74 dead in Texas. Also known as the "coastal spine," the protective barriers would comprise a system of floating gates, modeled loosely on the Netherlands' flood protection system. Texas Land Commissioner George P. Bush recently asked the Trump administration for the project's estimated \$15 billion price tag.

Congress already has approved a \$15 billion in disaster relief for Houston and the Gulf Coast, which Cruz called a down payment. He said that providing more funding to help the region recover is at least one issue on which Congress and President Donald Trump agree. Cruz did not specifically talk about funding for the Ike Dike.

Cruz took a helicopter ride with U.S. House Speaker Paul Ryan on Thursday to survey Harvey's damage. He said the speaker seemed surprised with Houston's sheer size, and how the damage spread across most of the Texas Gulf Coast.

"What's hard for people to grasp is the geographic scope of this storm – 250 miles," Cruz said. "The damage just keeps going and going and going."

The impact of Harvey has been felt well beyond those 250 miles. Harvey shuttered almost a quarter of the nation's oil refining capacity and gasoline prices jumped nearly 20 percent nationally. More than 90 percent of those plants are back online now, although many are still operating at reduced capacities.

Taylor said it could have been much worse. He showed a video that depicted a fictional Category 5 hurricane running up the Ship Channel, a scenario that could kill more than 2,300 people and damage industry so badly that the region's refining sector would be knocked offline for about two years.

That, in turn, would trigger \$8 per gallon gasoline nationwide and long lines of people fighting amid severe fuel shortages, the video said. It would also produce shortages for jet fuel, military-grade fuel, construction materials and plastics.

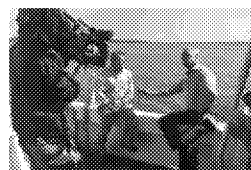
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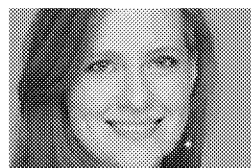
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**Sen. Ted Cruz says flood control will be a priority in Congress**

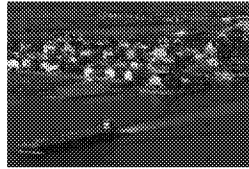


**'Ike Dike' plan to be focus of '60 Minutes' report**



**Falkenberg: As support for Ike Dike grows, we still need boosters**

About \$70 billion is expected to be invested in Texas Gulf Coast petrochemical plants through 2023, according to the American Chemistry Council trade group.



**Stokes: Cost must be considered in building storm surge barrier**



**Will climate change make storms more severe?**



**Berger: Five days of hellish rainfall must be a wake-up call**

In a recent interview prior to Thursday's forum, Perry, a former Texas governor, said as the U.S. energy industry grows, it might make sense to build future refineries and other energy facilities in other parts of the country. "The storm is a great example of why we need to be having that conversation," he said.

Perry, however, did not raise the issue at the forum. He instead praised the ongoing energy growth in the Houston area, noting the U.S. is set to become a net natural gas exporter and that "the United States now has a decisive competitive advantage in the making of petrochemicals."

Just on Thursday, the newly merged Dow-DuPont announced it started operations at its massive new chemicals and plastics expansion south of Houston in Freeport.

Earl Shipp, Dow's vice president of Gulf Coast operations, said the region needs the "resolve" and financial support to build projects like the coastal spine, especially when he sees the homes of many of Dow's employees flooding.

"You can't sell Houston if that's the narrative people see when they look at us," Shipp said. "But there are solutions."

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## TRANSLATOR

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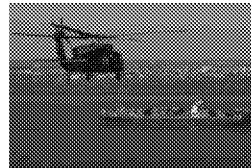
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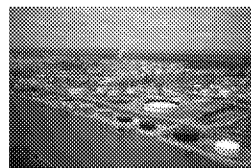
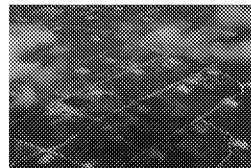
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**Will Hurricane Harvey bring federal support for the 'Ike dike'?**



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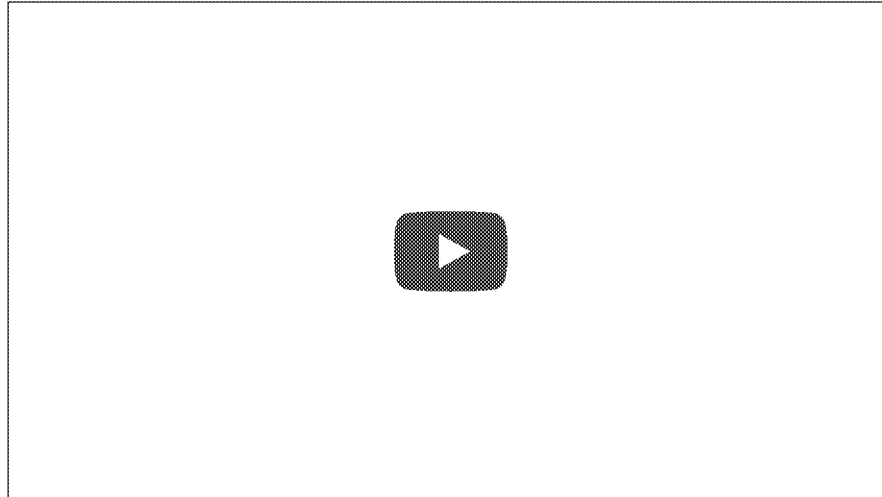


# Protesters demand Environmental Impact Study for Bayou Bridge, LOGA reacts

Posted: Sep 21, 2017 10:32 PM CDT  
Updated: Sep 21, 2017 10:58 PM CDT

By Dannielle Garcia

BATON ROUGE, La. -



The debate over the proposed Bayou Bridge Pipeline continues.

Protesters in front of the Governor's Mansion in Baton Rouge are demanding an Environmental Impact Study (EIS) be done on the proposed pipeline and are hoping to get the governor's attention to oppose the project.

In Louisiana, the 162-mile pipeline would link refineries to hubs in Texas.

The project would cut through the Atchafalaya Basin. It's part of a larger interstate, multi-million dollar pipeline that connects to the Dakota Access Pipeline in North Dakota, which was met with protests over the past year. And today, more protestors, but this time in Baton Rouge.

"We don't want this company in our bayous and our basin. And we want to respect the people who live here, respect the land and the water," said Cherri Foytlin, an environmental activist from Rayne.

Bayou Bridge is proposed to cross more than 700 Acadiana waterways and 600 acres of wetlands.

"They'll knock us over I don't know how many times, but we'll just keep standing up," said Foytlin, preaching to the small crowd of protesters.

These protesters say they're concerned about the spill record of Energy Transfer Partners, the company behind Bayou Bridge, Dakota Access, and other pipelines.

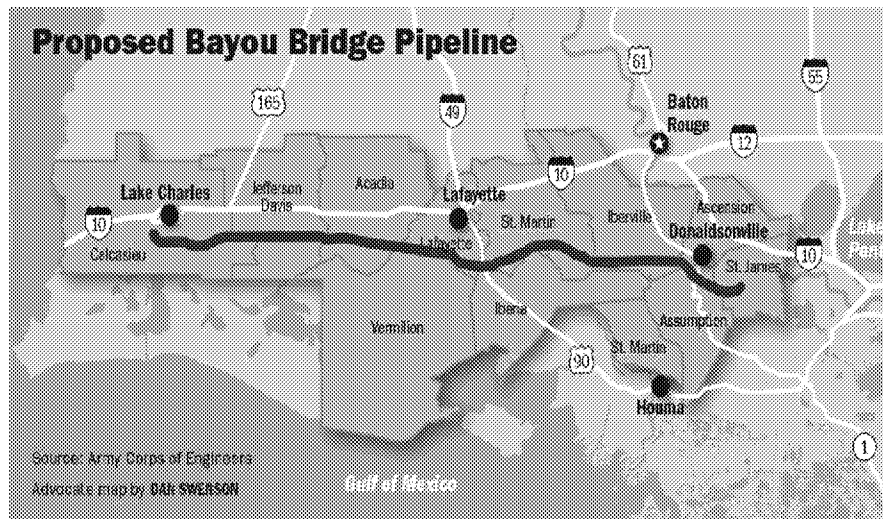
Just yesterday, Ohio regulators said they want to lodge a \$2.3 million fine against the company for its' rover pipeline, where 2-million gallons of drilling sludge leaked into protected wetlands during the natural-gas line's construction.

Bayou Bridge would cross beneath the Atchafalaya Basin.

"The Atchafalaya is the largest swamp in North America. It's a national treasure, if they want to talk about our legacy, our legacy is the Atchafalaya Basin. We must protect it at all costs," said Foytlin, holding a "Stop Bayou Bridge" sign.

And it would end in the community of St. James, supplying its nearly one dozen refineries and petrochemical plants. People living in that area say another pipeline, is the last thing their neighborhoods need.

"My fight is how long does it take to make it into soil? How many times can you filter water before its actually drinkable? Everybody buys bottle water and we shouldn't have to buy bottled water we should be able to garden," said Eve Butler, who lives in St. James.



Federal law requires an EIS, if the project would have a "cumulative or significant impact on the human environment," according to the EPA.

Only 7 have been completed for pipelines since 1987, although dozens have been built in the state. Bayou Bridge is proposed along existing pipelines, which the Louisiana Oil and Gas Association (LOGA) said is the reason they don't have to create one.

"There's federal laws that regulate when an environment impact statement is necessary and when they're not. You know, the majority of this project goes where existing pipeline and infrastructure are already in place which might be why it's not required for this particular project," said Gifford Briggs, the VP of LOGA.

They maintain that pipelines are the safest way to transport natural gases, versus by train or truck.

"50% of the fuel that powers this country flows through Louisiana," said Briggs.

The protestors, delivered letters to the governor's office, urging him to oppose the project. However, Gov. Edwards says he supports the pipeline.

"It's going to have to meet all the requirements in law and in regulation and we will enforce all of the permit requirements as well. That has not always been done in the past and I think that's why so many people are concerned with the construction of this pipeline," said Gov. Edwards on a "The Jim Engster Show," a radio show that aired Wednesday.

## Water treatment plant near Gold King mine filters out sludge

*Meg Hilling*

*September 21, 2017 07:32 PM*

SILVERTON, Colo. -- If you have wandered up in the mountains near Silverton, you may have seen a facility tucked away in the hills close to the site of the Gold King Mine spill. That facility would be a water treatment plant.

Put in place two months after the spill, the plant filters out minerals like copper and zinc that come with water running down from the mine.

"It's a very simple standard lime treatment process," EPA Superfund Site Project Manager Rebecca Thomas said.

"We add lime to the water. Raise the PH. All the metal contaminations drop out. We are left with this byproduct of sludge."



Millions of pounds of sludge each year are filtered out at the plant. Taking the water from the mine via these pipes, the water is mixed with lime and polymers in order to clump them up as the water is filtered out.

The filtered water is then released into creeks, while the sludge is sent to these massive retaining bags. Once the sludge bags are full outside, any remaining water in those bags is brought back into the treatment facility and cycled through once more before being released out into the

creeks. The full bags of sludge are then opened up, dug out, and stored at the facility.

No long-term site for the sludge has been determined, marking yet another mine pollution task the Environmental Protection Agency is pursuing.

"There absolutely is a lot more work that needs to be done," said Albert Kelly, a senior advisor to the EPA administrator. "I think we are positioned well to do it, keeping in mind that for every action, there is an opposite and equal reaction. We have to be sure that those actions we take are going to be solid solutions."

The EPA says the site is currently considered temporary.

**LAW****Fracking rule may see jumbled comeback as court tosses case**

Ellen M. Gilmer, E&amp;E News reporter

Energywire: Friday, September 22, 2017



A drilling rig sits on public land in New Mexico. Ellen M. Gilmer/E&amp;E News

*This story was updated at 9:31 a.m. EDT.*

Confusion and mixed messages dominated the conversation yesterday as court watchers unpacked a major ruling on the Obama administration's embattled hydraulic fracturing rule.

The 10th U.S. Circuit Court of Appeals **dismissed** litigation over the Interior Department's fracking rule without directly weighing the core legal question of whether the federal government has authority over the oil and gas extraction process.

But the panel of judges also scrapped a lower court's 2016 ruling that struck down the regulation, clearing the way for the rule to take effect — however briefly — even as the Trump administration works to rescind it. The court has not yet issued a final mandate in the case, and the rule won't be revived until then.

Supporters and opponents of the fracking rule pushed dueling messages in the wake of the decision yesterday, each declaring victory.

Environmental groups celebrated the revival of the rule, claiming vindication after a yearslong legal battle (*E&E News PM*, Sept. 21). Sierra Club attorney Nathan Matthews said the ruling "reinstates much-needed protections."

Industry groups, meanwhile, cheered the 10th Circuit's conclusion that it would be a waste of the court's resources to answer the underlying legal question of fracking authority.

"Today's court decision confirms what IPAA has advocated all along: Dismissing the appeal would protect independent producers from the uncertainty of whether it was necessary to comply with regulations that are certain to be revoked," Independent Petroleum Association of America President Barry Russell said.

But the legal tug of war is likely far from over.

The Trump administration, backed by industry and several Western states, is expected to move quickly to block implementation of the fracking rule. Any such effort by Interior's Bureau of Land Management will face legal pushback from environmentalists that have defended the standards since their unveiling more than two years ago.

New litigation will likely follow any attempt by the Trump administration to avoid implementing the rule. And separate lawsuits are expected once Interior finalizes its official rescission of the rule.

The 10th Circuit's judgment doesn't officially take effect until the court issues a mandate. For cases involving the U.S. government, courts have 52 days after a ruling to issue the mandate. That would give the Trump administration until mid-November to delay the regulation or finalize its rescission before having to implement it.

In a statement this morning, Interior said, "We are expeditiously working on a new rule that will fulfill the President's and Secretary's vision of good jobs for hardworking American families and are continuing to take comments on the proposed rescission of the 2015 hydraulic fracturing rule."

### The fallout

Widespread uncertainty over what the court's ruling means and what happens next stems from procedural and timing complexities in the litigation. The Obama administration released the regulation in March 2015, but a Wyoming district court quickly blocked it and ultimately found that Interior has no authority over fracking. The rule has never taken effect.

#### Fracking rule's winding path



The Obama administration and environmental groups appealed the Wyoming decision to the 10th Circuit, but while the case was pending, President Trump took office, and the new administration announced plans to roll back the rule. Trump lawyers urged the court to freeze the case in light of the rescission plans.

Instead, the court scrapped the case entirely and nixed the underlying Wyoming decision — putting pressure on the Trump administration to take quick action on its rollback plans. The opinion noted that it's unclear how much time BLM will need to complete its proposal to rescind the fracking rule.

"Here, the BLM stated at our very recent oral argument that the 60 day notice and comment period could be extended, to say nothing of how many additional months or years would be needed to issue a final rule rescinding the regulation," wrote Judge Mary Beck Briscoe, a Clinton appointee.

Judge Jerome Holmes, a George W. Bush appointee, joined the opinion. Judge Harris Hartz, another Bush appointee, joined in the determination that the court should dismiss the case but opposed scrapping the lower court's decision.

Vacating the Wyoming decision means there is no legal mechanism in place to stop the fracking rule from taking effect. Earthjustice attorney Mike Freeman, who argued the case for a coalition of environmental groups, said the bottom line of the decision is that the government's

authority to regulate fracking is no longer in question.

"We're happy that the court reached the result it did," he told E&E News. "Vacating the lower court's decision takes us back to the legal status quo before the [Wyoming] court's ruling, which was that there's a century of case law and precedent that makes clear that BLM has the authority to do what it did here."

Freeman added that the environmental community is eager to see the fracking rule finally take effect.

Other lawyers in the case expressed uncertainty over whether the court intended to revive the fracking rule, noting that the opinion includes language that seems to contemplate a continued "status quo" that does not

include the regulation.

"The only 'harm' the Citizen Group intervenors will suffer is the continued operation of oil and gas development on federal lands, which represents no departure from the status quo since 2015," the opinion says.

Hartz's partial dissent included the most explicit acknowledgement of the immediate implications of the court's decision, noting that the majority was "giving effect to the Regulation." Hartz parted from his colleagues, arguing that the panel lacked sufficient information to do that.

Kathleen Sgamma, president of the industry group Western Energy Alliance, dismissed the uncertainty over the rule's status as "technicalities" that will be worked out quickly.

"We're pleased that after today, IPAA and Western Energy Alliance are even closer to finally putting BLM's ill-conceived fracking rule to bed," she said in a statement. "As with the royalty valuation rule that was recently completely rescinded, there are some technicalities to work through in the short term, but just as the court recognizes that it is not worthwhile to expend judicial resources on a rule that is being overturned, it is clear that implementing the rule in the short term is likewise a waste of industry and government resources."

For BLM's Obama-era valuation rule, a federal court ruled that the Trump administration was unlawful in its attempt to freeze the rule, but the court declined to take further action in light of the agency's recently finalized rescission of the rule ([Greenwire](#), Aug. 31).

The Trump administration is in the middle of its effort to unwind the fracking rule. BLM released a proposal to rescind it in July. Public comments are due next week, and the agency will then reach a final decision. It is unclear whether BLM plans to eventually replace any elements of the rule.

### An unpredictable path

Yesterday's decision is the latest twist in the unpredictable path of the Obama administration's fracking rule.

The years-in-the-making rule — President Obama's marquee effort to address concerns about the spread of high-volume fracking — was released in March 2015 and created a federal approval process for fracking on public and tribal lands. The rule set new standards for well construction, wastewater management and chemical disclosure for fracked wells.

It immediately faced legal challenges from industry groups, several Western states and American Indian tribes that saw it as an overly expensive and unworkable regulatory overreach. Wyoming and other states argued that it was beyond BLM's authority because the Safe Drinking Water Act put EPA in charge of fracking, and the Energy Policy Act of 2005 subsequently assigned that power to state overseers.

The U.S. District Court for the District of Wyoming promptly blocked the rule and eventually accepted the states' argument that the federal government lacks authority to regulate fracking.

The Trump administration has walked a fine line in legal briefs, defending its authority over fracking even as it seeks to scrap the regulation. Government lawyers urged the court to freeze the case while that rescission process plays out.

The 10th Circuit heard oral arguments in Denver in July ([Energywire](#), July 28).

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## Who watches WIPP?: Monitoring center a watchdog as facility recovers

By Adrian C. Hedden / Carlsbad Current-Argus, N.M. (TNS)

Friday, September 22nd, 2017 at 9:18am

Tucked away on a hilltop on the north side of Carlsbad scientists are constantly monitoring the Waste Isolation Pilot Plant.

At the Carlsbad Environmental Monitoring and Research Center (CEMRC), air and soil samples from near and at the WIPP site, located just 23 miles from Carlsbad, are constantly being studied for heightened levels of radiation.

Any resident living within 100 miles of the site is offered free body count scans to determine radiation levels in the body and in exhaled air.

For 15 years the center detected no troubling activity.

But that all changed in February 2014.

Waste handlers at Los Alamos National Laboratory switched from a clay-based packing material to an organic wheat-based cat litter.

The organic matter was combined with the nitrate salts used in drums of the waste, causing radiation to leak out of the containers stored underground, and exposing 22 workers to low-levels of radiation.

Lab results showed heightened radiation in fecal samples taken from the workers. Days later tests were negative, as the radiation appeared to be flushed from their bodies.

CEMRC noticed higher levels in air samples, immediately announcing the findings.

Director Russell Hardy said that announcement forced WIPP to publicize its findings from the workers.

It's a point he showed pride in, as a watchdog organization protecting the public.

"That's our mission," Hardy said. "We're the eyes and ears of the community. We're making sure the air coming out is safe."

Despite a measurable spike in radiation in the air for the next year, Hardy said the people of Carlsbad and Eddy County were never at risk.

"We dodged a bullet," Hardy said. "Even though (the release) gave WIPP a black eye, where and when it happened, in a controlled environment, was probably the best. It proves the repository was needed. We just need to be careful how the waste is packaged and managed."

Opposition to the storage of waste at WIPP continues years later. But Hardy said most naysayers are not local.

If nuclear power had been introduced to the public as an energy source, rather than a world-shaking bomb, Hardy said there would be less opposition.

"I don't think, locally, there is a concern," he said. "If there's any opposition, it's up north where our antis are. We have bunch of groups that oppose not only WIPP, but anything nuclear."

'We're doing it for the public'

In CEMRC's laboratories, scientists from WIPP and Los Alamos National Laboratory work side by side with the center's own technicians to scan samples for radiological content.



All three organizations perform similar studies, but also work together to confirm results, or discredit any anomalies.

“They’re doing it for their waste permit,” Hardy said of WIPP’s lab. “We’re doing it for the public. But if they see something, we should too.”

CEMRC’s testing labs were recently remodeled, he said, to the tune of \$500,000.

It was offline for the last three months, after heated acids disintegrated and rusted many metal components in the lab.

“We use strong acids and heat,” Hardy said. “After 20 years, it eats up the metal.”

The new lab is completed, and is resuming tests of a two-month backlog of samples.

Samples are typically monitored for five days, but in the year after the release they were expedited.

The extra time allows CEMRC’s instruments to detect even a slight change in radiation levels.

“Our primary objective is to make sure what gets put underground stays underground,” Hardy said. “For 15 years that was the case.”

In the months after the 2014 incident, Hardy said 150 people were tested for elevated levels of radiation.

No cause for concern was detected.

“You’d have to get a pretty good dose to see it,” he said.

To measure the level of radiation in the air, CEMRC uses becquerel units per cubic meter (Bq/m<sup>3</sup>). Becquerels represent the disintegration per second of nuclear materials.

From 1998 to 2014, CEMRC data shows readings were rarely above .00000001 Bq/m<sup>3</sup>.

But following the accident, levels in the air rose to 1,000 Bq/m<sup>3</sup> before the use of high efficiency particulate air (HEPA) filtration.

In 2014, post-HEPA readings were at about .1 Bq/m<sup>3</sup>.

Hardy said air with high levels of radiation are dangerous if inhaled in an enclosed space, such as a mine.

For the average person outside the facility, he said there was little risk.

The most recent data shows readings have dropped gradually back to the original levels since the incident.

Hardy said even the highest reading during the incident was still well below the Environmental Protection Agency’s standards.

“It was exciting for us to measure something other than what was normal,” he said. “It was unsettling for some, but there was no risk to the public.”

In addition to testing for radiation, CEMRC is also under contract with WIPP to provide data from air tests in the underground mine.

Those tests are meant to detect volatile organic compounds, or VOCs.

These compounds are not radioactive, but are known carcinogens, meaning they cause cancer.

Before the radiological release, Hardy said about 460,000 cubic feet of air was flowing through WIPP’s underground.

Since the incident, ventilation was restricted to 160,000 cubic feet, a reduction that he said makes air quality a concern.

The air must test clean before anyone is allowed into WIPP's underground passages.

"They do have periods when the concentrations get too high," Hardy said. "They'd never allow people in if it tests too high."

But if levels do increase, be it radioactive or carcinogenic, CEMRC is watching from its perch over Carlsbad.

"A lot of people don't know this building exists," Hardy said of the building which is owned by New Mexico State University, with funding from the U.S. Department of Energy. "Or that we have such sophisticated technology."

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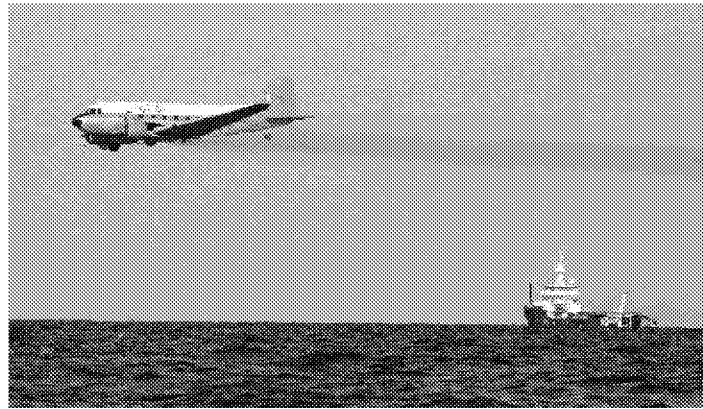
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LOUISIANA ENVIRONMENT AND FLOOD CONTROL

## Dispersant used in BP oil spill sickened workers, new federal study confirms

13      Posted on September 22, 2017 at 6:15 AM



A dispersant plane passes an oil skimmer working to clean the BP oil disaster on April 27, 2010.( Associated Press archive)

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**By Tristan Baurick,** [tbaurick@nola.com](mailto:tbaurick@nola.com),

NOLA.com | The Times-Picayune

The chemicals that were used to break up oil from the 2010 BP Deepwater Horizon blowout have long been suspected of sickening workers who responded to the disaster. Now a federal health agency is backing some of their assertions.

The National Institutes of Health this month published a study saying workers exposed to oil dispersants suffered a range of symptoms, including cough, shortness of breath and eye and lung irritation. The authors make for the most prominent group of scientists to examine the human health effects of dispersants.

For 87 days after the Deepwater Horizon drilling platform exploded off the Louisiana coast, the Macondo well spewed oil largely unchecked into the Gulf of Mexico. At 172 million gallons lost, it was the world's largest oil disaster.

Two dispersants, Corexit EC9500A and Corexit EC9527A, both manufactured by Nalco Environmental Solutions, were dropped by airplane to break up oil on the water's surface. It was the first time dispersants had been used on a large scale, and their potential effects on human health and the environment were not known. As late as 2013, a BP spokesman told The Times-Picayune that dispersants posed no health or safety concerns.

The National Institutes of Health study follows similar research by university scientists and activist groups in the years after the disaster. In interviews with the Government Accountability Project, a Washington D.C. watchdog group, cleanup workers and coastal residents reported a wide range of symptoms, including memory loss, bloody urine, heart problems and liver damage, according to a 2013 report. A 2015 study by the University of Alabama at Birmingham indicated dispersants could damage human lungs and the gills of fish and other marine life.

National Institutes of Health scientists found that workers exposed to dispersants were more likely to experience certain symptoms -- cough, wheeze, chest tightness and burning in the eyes, nose, throat and lungs -- than those who were not exposed to dispersants. The researchers were able to isolate the effects of oil exposure, which is also harmful, from those associated with dispersants.

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Dale Sandler, a researcher who worked on the study, said the findings apply to only workers involved in the cleanup effort. "The health effects that we see in the workers don't necessarily apply to the community at large, although many of the workers live in affected areas," she said.

Most workers who suffered health problems during the cleanup no longer had them three years later, indicating dispersants might cause only short-term harm. A small percentage of workers were still feeling the same symptoms years after the disaster, according the new study. "Some of them are continuing to not feel well, and we don't know what factors are contributing to it," National Institutes of Health scientist Linda Birnbaum said.

A BP spokesman on Thursday (Sept. 21) would not comment on the study. In the past, BP has said the use of dispersants was approved by federal environmental agencies and the U.S. Coast Guard.

According to the National Institutes of Health, most research on dispersants has focused on their effectiveness and potential environmental consequences, with little study of their effects on human health. While finding no evidence of serious problems, the new study cited research by other institutions suggesting dispersants might be toxic to animals.

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National Institutes of Health researchers interviewed more than 31,000 people involved in the BP disaster response and cleanup. Participants who indicated symptoms were visited at home, where they underwent medical assessments and provided biological samples for testing.

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